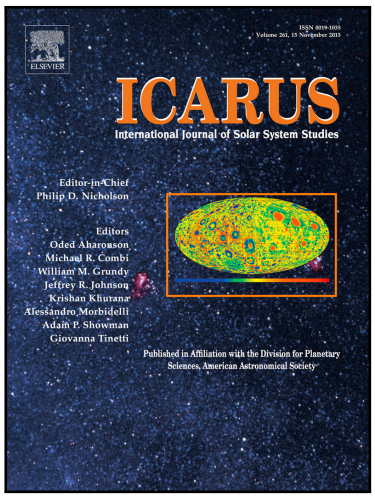

Fragment properties from large-scale asteroid collisions: I: Results from SPH/N-body simulations using porous parent bodies and improved material models

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Highlights

- We study the collisional disruption of 100 km- diameter asteroids
- The resulting size-frequency (SFD) and velocity distributions are computed
- The effects of pore-crushing as well as friction are investigated
- The porous targets have a significantly higher impact strength than the rubble-pile parent bodies investigated previously
- SFDs resulting from a collision with a given specific energy are strongly dependent on the size scale